



ONE DOLLAR PER YEAR.

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THOMAS G. NEWMAN,
EDITOR.

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Editorial Buzzings.

Mr. G. M. Doolittle, we notice, has been secured by the New York *Voice* to write this year on the subject of "Bee-Keeping for Profit and Pleasure," in the department "All Around the Farm." We congratulate the readers of that periodical in advance, and also Mr. Doolittle upon his newly attained honor. Our readers, who are frequently so delighted with his written experiences in the art of bee-keeping, as given in the BEE JOURNAL, will be glad to hear of the wide reading that will attend Mr. D.'s able articles in the *Voice*.

The Agriculturist for January contains a condensed report of the Albany convention. It was written by E. L. Pratt, in his usually interesting style.

Positive Proof was given by Mr. C. P. Dadant, at the Albany convention, that Mr. Smith's 60 colonies of bees had been poisoned by working on the fruit-tree bloom which had been sprayed by Paris green. After this Prof. Lintner stated that he doubted "if bees were killed by the poison."

This reminds us of a story. A man was put into jail for debt. He sent for an attorney, who heard his statement, and said: "They can't put you in jail for being in debt." The man replied: "Thee talks like a fool. I'm in jail now, and thou hast come here and found me."

Talk as he may, the Professor cannot do away with the fact that the bees worked on the poisoned bloom, and they are dead! His doubts will never bring them to life again, even though he may continue to doubt forever?

The Pittsburg Dispatch of Nov. 22, 1891, contained the following item:

A new artificial honey which is said to be likely to become a formidable rival of the natural product, is being made in Germany. It consists of water, sugar, a small quantity of mineral salts, and a free acid. The resemblance is increased by incorporating into the product the scent of flowers.

It is a falsehood. No such "formidable rival" to honey is in existence either in Germany or elsewhere! The item originated in the fertile brain of some scribbler for the press, and was intended only for "sensational" news!

The item will, of course, be published in Germany, but its manufacture will be located in America. Such liars always locate the manufactory as far off as possible, for "distance lends enchantment," you know!

Mr. C. P. Dadant has had an experience with *La Grippe* since returning from Albany. We are glad to state that he is recovering from its effects.

The same disease was responsible for the absence of a number of apiarists.

The Honey and the Gall.

When a man ain't got a cent, an' he's feeling kind o' blue,
 An' the clouds hang dark an' heavy, an' won't let the sunshine through.
 It's a great thing, oh, my brethren, for a feller just to lay
 His hand upon your shoulder in a friendly sort o' way!

It makes a man feel curious ; it makes the tear-drops start,
 And you sort o' feel a flutter in the region of your heart,
 You can't look up and meet his eyes ; you don't know what to say.
 When his hand is on your shoulder in a friendly sort o' way !

Oh, the world is a curious compound, with its honey and its gall.
 With its cares and bitter crosses ; but a good world after all,
 And a good God must have made it—leastways, that's what I say
 When a hand rests on my shoulder in a friendly sort o' way !

—Atlanta Constitution.

Sublime ! We were almost struck dumb upon receiving the following letter from a Western firm, dated Dec. 15, 1891 :

At what price could you use some "artificial honey comb" in sections, ready to be put in the hives, to be filled and capped over by the bees ?

The combs will be made of wax, double or two sided. Cells $\frac{1}{2}$ of an inch long, and hexagon-shaped. The sections will be about $4\frac{1}{4} \times 4\frac{1}{4}$, and will be put up in white-wood 12-section cases, with glass fronts.

This manner will enable the bee-keeper to produce more honey at a much less cost than at the present time.

We also expect to be prepared to furnish "artificial comb honey" in a short time, both white and amber. I would be glad to hear from you on the above subject.

Can it be possible that they take us for adulterators, frauds, green-goods men, or the like of that ?

We wrote them that if they had any "artificial honey-comb," or "artificial comb-honey," we should like to see samples of it ; that we had no evidence that any such things were in existence, etc.

We shall see what will come in reply, if anything. We really cannot imagine why they wrote to us about it, and have not yet been able to come to a conclusion

as to whether they are deceivers, or are being deceived.

They say that they "expect to be prepared to furnish artificial comb-honey in a short time, both white and amber." This shows that they are not confident ! Are they furnishing money to some sharper, who is deceiving them, by promising to invent the "artificial comb-honey" in a short time—to enable them to make fortunes ?

The Meanest tactics that could be employed are sometimes resorted to by persons who are controlled by their passions. Mr. G. W. Gish, of South Bend, Ind., writes as follows :

I am troubled here by two fruit men, who kill not only my bees, but those belonging to other persons. They hire boys to stand at convenient places with paddles and tweezers to kill all the bees they can. In such places the sidewalk was almost black with dead bees.

To thus interfere with the legitimate business of any one is a crime, and should be severely punished. Every honorable person will condemn such nefarious practices.

Spraying fruit trees in order to destroy injurious insects which prey upon the fruit is a matter which has received considerable attention among fruit-growers.

At first they sprayed the bloom with London purple or Paris green, but more lately with the Bordeaux mixture. This spraying of the trees *while in bloom* has caused much trouble by the bees working on the blossoms, and being poisoned thereby. Mr. John G. Smith, of New Canton, Ills., lost 60 colonies from that cause, as was noted in the BEE JOURNAL for April 16, 1891, on page 505.

The bee-periodicals raised such a cry of alarm that now cases are very few where the spraying is done before the formation of the fruit, for it has been demonstrated that the curculio and codling moth work on the newly-formed

fruit, and not on the blossoms. To spray the trees while in bloom is, therefore, quite useless, and results only in death to the bees—not to the worms.

In the light of these facts our readers will be surprised to see on page 49 of this BEE JOURNAL that Prof. J. A. Lintner, of New York, attended the late meeting of the North American Bee-Keepers' Association, at Albany, and *asked to be heard* on this subject.

He stated that "it would be an advantage, so far as the destruction of some insects is concerned, if spraying could be resorted to previous to and during the bloom." Not content with this, he said that he doubted "if bees were killed by the poison," and pressed his opinion so strongly, that in order to satisfy him, a committee of three was appointed to make experiments to prove "whether the spraying of trees, while in bloom, actually does lead to the destruction of bees."

We are glad to state, however, that the convention did, by vote, condemn the spraying of trees while in bloom, before that committee was appointed.

That committee, if it does anything, should, at the earliest possible moment, make the experiments and report the result through the bee-periodicals.

It is of the greatest importance that no excuse should be allowed for the inauguration of another crusade against the bees next Spring, by encouraging fruit growers to spray fruit trees while in bloom.

It is to be regretted that Prof. Lintner should have been allowed to make such statements before such an important meeting of bee-keepers. Did he come there for that purpose? The matter was not on the programme, and would probably not have been mentioned had he not "asked to be allowed to say" what he did.

We fear that it was a decided *blunder* not to have expunged the matter from the published report of the convention. It would have done no harm to omit it, and that would have been safe.

Now, perhaps the best that can be done will be to publish the report of the committee as soon as it is possible to make the experiments.

To illustrate the evil of such publication, here is a "special cable dispatch" lately published in the *Chicago Post*:

LONDON, Dec. 26.—The *Horticultural Times* has caused some alarm by asserting that American apples are poisonous, as American grapes were sometime ago found to be, owing to the limbs of trees being syringed with chemical solutions to destroy insects, which poisoned the skin of the growing fruit. Demand is made that the Board of Trade restrict the importation of apples. It is asserted that the use of these poisonous solutions is increasing in the United States. The Board of Trade will probably inquire into the matter, owing to the statement that tons of grapes were destroyed by the New York authorities.

Notwithstanding the fact that it was authoritatively settled many months ago, and widely published to the world (see BEE JOURNAL for Oct. 1 and Nov. 5, 1891, pages 423 and 581), that the Bordeaux mixture, used in spraying those grapes, was a solution of sulphate of copper and lime, and was by the Department of Agriculture pronounced harmless—yet it having been published to the world that the grapes were poisonous, like the Wiley lie, it can never be recalled—the truth never will overtake the falsehood and destroy its influence! It "alarms" every time it is repeated, just as much as if its poisonous effects had never been contradicted! It is just as potent to-day in London, as if it were true that hundreds had been poisoned last Fall in New York, by eating the grapes in question!

At the Late Convention of the Illinois State Bee-Keepers' Association, a committee consisting of Mrs. L. Harrison, G. F. Robbins, S. N. Black, W. J. Finch and A. N. Draper, was appointed to formulate a premium list for the Sangamon County Fair. That is right. The fair premium lists should be looked after everywhere.

La Grippe holds two kings in its grasp, in addition to scores of princes, governors, legislators, and an innumerable number of ordinary mortals, and it made them all feel, for the time being, at least, as if life was not worth living.

It is paying particular attention to our public men. Among those down with it are Secretary Foster, Speaker Crisp, Congressman Mills, Gov.-elect McKinley, Quay, Gov. Campbell, and a number of others. This malarial contagion seems to be more prevalent than when it first appeared.

Hundreds of prominent bee-keepers are down with it, though but few have died. The Editor and Manager of the BEE JOURNAL have about recovered; Drs. Mason and Miller, and others, too numerous to mention them all, are, or expect soon to be, "on deck" again.

Influenza patients have been quarantined in Kent County, England. Any such who visit public places are fined £5 each.

We Have only a few Binders left of the large size, for the BEE JOURNALS previous to this year. If you want one, please send at once, before all are gone. Price, 60 cents.

Queries and Replies.

When to Put Bees into Cellars.

QUERY 800.—When wintering bees in a cellar, should they be put in while the weather is warm, or wait until a hard frost?—W.

I do not know.—J. E. POND.

I would wait until after the frost.—J. P. H. BROWN.

Immediately after they have had a good flight.—J. M. HAMBAUGH.

Just before steady cold weather or real Winter weather begins.—M. MAHIN.

I prefer to have it cool enough so that they will cluster nicely and be quiet.—A. B. MASON.

Put them into the cellar just after a warm spell, when it is getting colder.—C. H. DIBBERN.

Bees go into the cellar best when the mercury ranges at from 35° to 40°.—G. M. DOOLITTLE.

Put them in when you think they are not likely to have any more thorough flights.—JAMES HEDDON.

Just before "freezing up"—about the middle of November in lower Michigan.—R. L. TAYLOR.

Wait until several hard frosts, but house them before they freeze.—EUGENE SECOR.

Wait until there is some hard freezing, but not so hard as to cause frost in the hives.—G. L. TINKER.

You are not likely to get them in before a hard frost, but get them in, if possible, when they are not frozen or wet.—C. C. MILLER.

Put them in at the beginning of a hard frost, or the day following a warm day, i. e., when their bowels are empty.—DADANT & SON.

I would prefer to have them put in after they had ceased to fly, on a warm day. When a person is pinched with cold they would not handle them so gently.—MRS. L. HARRISON.

Put them in before the cold weather comes. The only rule is to put them in while they are dry. I do not like them wet, and decidedly object to snow or ice on them.—A. J. COOK.

I have found in my locality that it is best to put bees into the cellar when it has become settled cold. Do not wait until the ground has become frozen.—H. D. CUTTING.

I would prefer to handle the hives on a day that was just cold enough to keep the bees quietly in the hives. I have moved my apiary a short distance three times in the past twelve years, with great success, and I selected that sort of weather to do the work.—G. W. DEMAREE.

After settled cold weather has come, will be time enough to put bees into cellars. The Winter confinement will be long enough, without any "lengthening." Of course it should not be cold enough to make it a very disagreeable job, for then it would not be carefully done. A little observation will cause the selection of a suitable time for the work.—THE EDITOR.

Topics of Interest.

Illinois State Convention.

JAS. A. STONE.

At this, my first spare moment, I proceed to give a kind of synopsis of the late convention of the Illinois State Bee-Keepers' Association. The attendance was not as large as we hoped for. Some of the members sent their regrets, and that sickness was keeping them away. And we hear from many that were kept away on account of *La Grippe*, etc. Though we had a fair attendance, and an exceedingly interesting meeting.

Our meeting was held in the Senate Judiciary room at the State House, and through the kindness of the State Secretary, I. N. Pierson, and Chief Janitor W. E. Savage, we received the attention that could not fail to make our visit to the capital a pleasant one.

The meeting was called to order by the President, P. J. England, of Fancy Prairie, and Rev. Dr. Johnson, of Springfield, invoked the divine blessing—praying that we might learn lessons of industry from the habits of the little bee.

Mr. G. F. Robbins, of Mechanicsburg, gave us a very eloquent address, to which Mrs. L. Harrison, of Peoria, just as eloquently responded.

Each member was then requested to report as to their several apiaries, which feature proved to be as much of a love feast as it was said to be at the meeting of the Northwestern. And although none could report any light-colored honey, and not a great quantity of dark, it was talked and laughed over as though it was something to amuse rather than disappoint. Later we received a report from A. Coppin, of Wenona, stating that his crop of white comb-honey this year was 3,000 pounds, and that they had no honey-dew.

The Secretary, in his report, took the stand that it was unjust, and prejudiced the minds of consumers, for us to call honey-dew bug-juice. And that honey-dew was not all from the exudation of the aphis; and if it was, it only differed from honey in that it was exuded by aphis, and fell upon the leaves, while honey and wax were exuded by bees in the hive. And, further, that as the season advanced honey-dew became darker, caused by the windy, dusty

weather, depositing dust where the honey-dew was on the leaves.

The Secretary's report also showed that our membership had increased to more than 50, largely through the efforts of Mr. A. N. Draper, of Upper Alton.

The Treasurer's report (A. N. Draper) showed a balance on hand of \$46.25.

Committee on by-laws, C. E. Yocom, of Sherman, A. Coppin, of Wenona, and G. F. Robbins, of Mechanicsburg, reported, and by-laws were unanimously adopted as a whole.

Hon. J. M. Hambaugh addressed the convention on "What Laws are Bee-Keepers in Need of?" He said that bee-keepers did not need many laws, but that they should have justice by being represented, recognized and protected in their interests the same as all other industries are.

Mrs. L. Harrison read an essay, explained by charts, as follows, on the

Fertilization of Plants by Honey-Bees

It appears to be the first anxiety and care of all animal and vegetable life, to reproduce its kind. As plants cannot walk like animals, other agents, viz: wind, water, birds and insects, were appointed to carry out the requirements of nature.

Some families of plants grow the male and female flowers on separate plants, as the willow and green ash. In others they are found growing on the same branch, as on the oak, walnut, or castor-oil plant. It is plainly seen that in these two modes of growth some foreign agent is necessary, to bring the life-giving power to the embryo plant.

Those plants that are dependent upon the wind to bring together the agents that produce life, yield pollen in great abundance, as the pines, and it is carried great distances. It has been seen covering the ground so thickly that it looked like a layer of sulphur, and it must have come from forests 400 miles distant. Currents of water convey pollen from one aquatic plant to another. In some parts of the world, as in South America or Australia, humming birds are the agents in conveying the pollen to some species of flowers.

Insects are powerful agents in this distribution of the "father dust," and many plants have their own particular insect. *Dicentra spectabilis* never bears seed in this country, because its fertilizing moth has never been introduced from North China, its native habitat. Red clover, *Trifolium pratense*, bore no

seed in Australia, until bumble-bees, *Bombus*, were introduced, and they appear to be the chief fertilizers of this valuable forage plant.

When Columbus discovered America he found no honey-bees here. But when the settlers came, they brought apples, pears, quince and cherry trees, and their fertilizers, the honey-bees. "Nature detests self fertilization."

The apple blossom is a perfect flower, containing both sexes in one, with the stamens and anthers waving above the germ; why then does it need a foreign agent to insure fertilization? On a close examination we find that when the germ is in season for the fertilizing powder, the anthers waving above have not burst. When the germ is ready, nature spreads a rich feast of delicious, fragrant nectar, and invites the bees to the nuptials. They come, like millers, with flour on their bodies, and their pollen baskets filled with it, kneaded into bread, and as they load up the nectar, they leave behind them some of the fertilizing powder in exchange.

Five distinct fertilizations must take place to produce a perfect apple; if the seeds on one side are fertilized, and those opposite are not, it will be shrunken, or one-sided.

Nature has so ordered that only a limited number of insects shall survive the Winter's cold; only the queens of some species, as bumble-bees and wasps; but bees dwelling in communities have survived by the thousands.

It has been found, "by actual count in time of fruit in May, that the bees outnumber all other insects twenty to one, upon the bloom; and on cool days, hundreds of bees are seen on the fruit blossoms, while not a single other insect can be found." Thus we see, that the honey-bees are exceedingly important in the economy of vegetable growth and fruitage, especially of all such plants as blossom early in the season.

In England, a fruit grower was surprised to find that the trees near one corner of his grounds, in which were placed colonies of bees, were heavily laden with fruit, while those more remote, had set very sparingly. Then he called to mind the fact of its being very dark and foggy during the blooming of the trees, so the bees flew but a short distance from their hives.

Fruit and bees are inseparable. Horticulturists and apiarists are, like the American Union, one, and inseparable. White clover, *Trifolium repens*, and its relative, Alsike clover, *Trifolium hybrida*,

is dependent almost entirely for fertilization upon honey-bees.

Dairymen have complained that bees robbed the pastures of their sweetness. A writer in the *Naturalist* says, "It is estimated that to collect one pound of honey from white clover, 62,000 heads of clover must be deprived of their nectar, and that 3,750,000 visits must be made by the bees." If this estimate is correct, the loss of sweetness is not appreciable.

Charles Darwin experimented for eleven years on the cross-fertilization of plants, and has given to the world some very valuable results, proving the very great value of cross-fertilization, as it is performed by insects. He found by experiments from 20 heads of white clover, protected from insects, one aborted seed was the only result, while 20 heads on the plants outside the net, and visited by bees, yielded by count 2,290 seeds. MRS. L. HARRISON.

A resolution made by Mrs. Harrison was adopted, viz: "That the thanks of this association are due to all the members of the State Legislature, who by voice or vote aided in placing our association upon a solid foundation; and in particular to the Hon. J. M. Hambaugh, of Spring, for his untiring efforts in behalf of our industry, and our Society."

A vote of thanks was also given to Mrs. L. Harrison for her efforts in behalf of the cause of bee-keepers throughout the State.

A resolution was adopted, and a committee appointed to prepare and report a premium list. Committee—Mrs. L. Harrison, Peoria, G. F. Robbins, S. N. Black, W. J. Finch, Jr., and A. N. Draper.

A resolution was adopted, and a committee of three appointed to prepare a code of rules to govern the awards of premiums at fairs. Committee—Geo. F. Robbins, Mechanicsburg, D. D. Cooper, and Chas. Becker.

A motion was carried that when we adjourn, it be to meet at 7:30 p.m. for a night session.

The question box was opened, and discussions followed which were participated in with much animation.

Adjourned.

The night session met at 7:30 p.m., for a sort of "love feast." Among other questions that came up, that of the adulteration of honey, caused a long continued discussion; the arguments generally favoring the passage of a law for its prevention.

SECOND DAY.

On Thursday at 9 a.m., the convention was called to order, with President P. J. England in the chair.

An address by Col. Chas. F. Mills was first in order. Subject—"Bee-Keeping for the Average Farmer."

Among the many things of importance of which he spoke were, of making fine exhibits at fairs, of advertising in papers, of the good results of agitation, and of honey for medicinal purposes.

Mr. Hambaugh moved a vote of thanks to Col. Mills for his usefulness to this association, and his assistance rendered in numerous ways.

On motion of S. N. Black, of Clayton, a committee of three were appointed on legislation, and on the gathering of statistics, consisting of J. M. Hambaugh, Mrs. L. Harrison, and Dr. C. C. Miller.

Dr. C. C. Miller, though absent, had previously sent in an excellent essay, which was read with good effect. Subject, "The Future of the Illinois State Bee-Keepers' Association." He favored the union of this and the Northwestern Association. He spoke of the importance of a large membership; of the privileges of bee-keepers in some countries, such as receiving bee-papers free, or for special rates, and of his faith in the future of this association, because of his faith in Illinois bee-keepers.

A resolution by S. N. Black was adopted as follows:

Resolved, That the Illinois State Bee-Keepers' Association endorse and accept the action of the Northwestern Bee-Keepers' Association as to joining this association, and that the President be hereby directed to call one meeting each year in Chicago, at such time as the Executive Committee may direct.

A resolution was adopted, that the Secretary be authorized to invite, in behalf of this association, all the other associations of the State to affiliate with us.

C. E. Yocom offered the following resolution, which was adopted:

Resolved, That the Illinois State Bee-Keepers' Association most earnestly protest against the opening of the World's Columbian Exposition on the sabbath.

Resolved, That a committee be appointed to prepare a memorial to be presented to the managers of the World's Fair and the State Board of Agriculture on this subject.

By a resolution the thanks of this association were extended to I. N. Pier-

son, Secretary of State, and W. E. Savage, Chief Janitor, for the use of the Senate Judiciary room, and for the kind treatment received during our most pleasant sessions.

A vote of thanks was also given to the St. Nicholas Hotel, for its kind hospitality.

By motion a committee of three was appointed to visit the different bee-keepers' societies of the State. The committee are: A. N. Draper, Upper Alton; W. J. Finch, Jr., Chesterfield; and C. E. Yocom, Sherman.

A motion by A. N. Draper prevailed, that a committee of three be appointed to ascertain from the State Board as to the value for honey of alfalfa, and other plants foreign to our soil, and have it inserted in our published report. The committee are Geo. Poindexter, of Kenney; S. N. Black, of Clayton; and L. Mason, of Auburn. The committee reported unfavorably on alfalfa.

The election of officers resulted as follows:

President—Hon. J. M. Hambaugh, Spring, Ills.

Vice-Presidents—1st, Mrs. L. Harrison, Peoria; 2nd, Mr. P. J. England, Fancy Prairie; 3rd, Dr. C. C. Miller, Marengo; 4th, C. P. Dadant, Hamilton; 5th, S. N. Black, Clayton.

Secretary—Jas. A. Stone, Bradfordton.

Treasurer—A. N. Draper, Upper Alton.

Following the election of officers an essay by A. C. Hammehd, Secretary of the State Horticultural Society was read as follows:

Bees in Horticulture.

In the economy of Nature it was ordered that the "little busy bee" should be an important factor in making fruit growing successful. Many a man has planted and carefully cultivated, pruned and trained, but when he looked for fruit, found "nothing but leaves," and has therefore concluded that he is not a born horticulturist, or that this is not a fruit country—when a little investigation would have shown him that the failure was caused by lack of fertilization. The wild goose plum, and crescent strawberry are marked illustrations of this truth.

Much can be done to overcome this difficulty by intermixing staminate and pistillate varieties, so that on the wings of the wind the fertilizing pollen will be carried from bloom to bloom. This is a wasteful method, and ninety-nine hun-

dredths of it is lost, to the great disappointment of the planter. But let a colony of bees be put near the orchard or fruit garden, and the busy little workers will, while extracting honey from the blossoms, cover their feet and legs with pollen, and when they go to the next blossom in search of its hidden treasures, leave it clinging to the delicate organs, and its influence will be seen in the large crops of fruit.

It will, therefore, be readily seen that the apiary is a valuable addition to the plant of the horticulturist, not only for the honey it may yield, but as a means of increasing the yield and quality of his fruit (imperfect fertilization often causes imperfect fruit), and therefore increases his profits.

On the other hand, the orchard, vineyard and garden afford excellent pasture during several weeks in the Spring; and during the entire season, from the first-ripening strawberries to that of cherries, plums, peaches, grapes, pears, and apples; they also gather up the exuding juices from those that have been punctured by birds, grasshoppers and other insects.

"O! yes," says the man ever ready to jump at conclusions, "I have seen them puncturing and sucking the juices from my grapes, peaches and plums, and sometimes even the apples, and I think they do great injury."

Half the world go through life with their eyes shut; at least, without making any careful investigations, and these heedless people, when they see the bees gathering up this wasting sweetness, thoughtlessly conclude that they have punctured the fruit to get the juice, while every entomologist and horticulturist knows that they never injure perfect fruit.

It is therefore evident that these two industries are very nearly related, and that every horticulturist should be a bee-keeper, and to a certain extent every bee-keeper should be a horticulturist.

There is, in some minds, an idea that spraying trees and plants to destroy insects, is necessarily a blow at the life of the bee, as well as dangerous to human life and health. If done while trees are in bloom, I think there is no question as to the existence of this danger. But entomologists and horticulturists who have made careful experiments, and watched the effect of arsenical sprays on fruit bloom, and leaf, are unanimously of the opinion that it is worse than useless to spray until the bloom has fallen, and the young fruit is

as large as peas. It is about this time that the eggs of the codling moth are laid and hatched, and the minute particles of poison deposited in the calyx are eaten by the young larvae, and its days of mischief are suddenly brought to a close.

If horticulturists and apiculturists would attend each others' conventions, and discuss these questions of mutual interest, it would be found to be very profitable to both; it is a great satisfaction to know that they are becoming better acquainted, and beginning to see that there is no antagonism between their interests. A. C. HAMMOND.

The following resolution, offered by Hon. J. M. Hambaugh, was adopted:

Resolved. That each member of the Illinois State Bee-Keepers' Association be transformed into an Information Bureau, with the object of giving the Secretary such information as would enhance the interests of the pursuit, and make the first report a model, and of incalculable benefit to the public.

Adjourned *sine die*.

JAMES A. STONE, Sec.

P. S.—Any bee-keepers wishing to have their names go into the first report of the Illinois State Bee-Keepers' Association as members of the same, must send in their names (and \$1.00) within the next 30 days to the Secretary. Other bee-papers are requested to copy this report.

Bradfordton, Ills.

Chilled Brood and Foul-Brood.

C. J. ROBINSON.

Dr. C. C. Miller says that "chilled brood *never made* foul-brood," and asks: "Does anyone really believe that it ever did? Do they not rather hold this view? The spores of foul-brood are so plentiful that they are floating around everywhere, and a lot of chilled brood is just the right soil for them to take root in, just as white clover seems to come up of itself."

Dr. Miller's assertion that chilled brood *never made* foul-brood is one of the things he "don't know." If he knows that chilled brood is the right soil for foul-brood spores to take root in, he ought to know that chilled foul-brood has, in fact, *made* foul-brood—has spread it.

Readers are not competent—not wise

enough—to "catch on" to any logical reason, in comparing the origin of foul-brood to that of white clover coming up of itself. If there be any truth in Dr. M.'s teaching, it is too subtle for mortals to perceive.

In another issue of *Gleanings* Dr. Miller quotes this from the AMERICAN BEE JOURNAL: "A new theory of foul-brood. A. Leach says the moth-miller lays eggs in the cells besides the queen's eggs, which hatch out, suck the food from the bee-larvæ, which die, causing foul-brood." Dr. Miller asserts by way of comment—"this lacks confirmation." Of course it does, as much so, almost, as does Dr. Miller's theory as quoted in the foregoing.

The idea that foul-brood spores "are floating around everywhere," is an invention of Mr. S. Corneil, but perhaps Dr. Miller may appropriate it without giving credit.

As matters of fact, live "brood is just the right soil" for foul-brood spores to take root in; and if the "spores are floating around everywhere," they are floating around every hive of bees, and if the spores float inside and attack chilled brood, certainly live brood could not escape; and if foul-brood spores float everywhere, all chilled brood and all bee-brood would, inevitably, be done for, by foul-brood spores.

Learned scientists "don't know" of any bacteria or spores that commonly float around in the atmosphere, other than the so-called *diplococcus pneumoniae* and the *streptococcus pyogenes*. If Corneil-Miller is credited with truth in the matter, somebody must invent a foul-brood-spore trap.

Richford, N. Y., Dec. 28, 1891.

Are there Black Bees in Italy?

GEORGE THOMPSON.

In Vol. XII, page 188, of the AMERICAN BEE JOURNAL, is a communication which I sent to the Michigan Bee-Keepers' Association, on the improvement of the Italian bee. I there stated that I thought from the unstable character of our Italians, that there must be many dark, and even *black* bees, in Italy, and pointed out the necessity of improving our drones, if we wished to improve the Italian bee.

In the August number, same volume, page 205, Chas. Dadant takes me to task, and denies that there were any black bees in Italy, and offered to pay

any man \$200 who could prove it. I undertook to do this, and in Vol. XIII, page 127, can be found proof enough to satisfy any reasonable, unbiased mind.

It is unnecessary to quote from that or subsequent articles—suffice it to say that it was generally believed, and even publicly declared in one of our bee conventions in Chicago, that I gave sufficient proof to sustain my assertion.

But now comes forward another witness to testify, and what I consider the crowning evidence, by a native of Italy, an intelligent bee-keeper, and one of the largest exporters of Italian queens in Italy (See *Gleanings* for Dec. 15, 1891, page 948). Question—Did you ever see any black bees in Italy? "Certainly, in some parts of Italy the black bee is to be found." This coming from a gentleman who is supposed to be, and doubtless is, interested in the purity of the Italian bee, ought to set forever at rest the truth that there are black bees in Italy.

Geneva, Ills.

[At the Albany convention last month, Mr. C. P. Dadant stated that black bees were found just over the mountains in Carniola, and if they are there why not expect to find some in Italy? While we were in Italy, in 1879, we certainly saw some in different apiaries, which, to all appearance, were nothing but black bees. If they had any yellow bands, they were obscure, and it would take good feeding with honey, and active exercise on a window in a sunny day, to discover any golden bands.—ED.]

Some Things That I Have Learned.

P. D. WALLACE.

I have kept bees for two seasons, and have stored away a large quantity of bee-lore in that time. The first thing I learned was that the experts do not agree, and in all replies to the Queries in the AMERICAN BEE JOURNAL, the last year, none were answered unanimously. I learned also that bees will swarm in good seasons, and in good localities, if they had surplus room as large as a barn—the assertions to the contrary notwithstanding. I also learned that in years of scarcity, and in poor pasturage, you cannot induce, force, or coax them to swarm to any extent; that there may

be nectar in a flower one year, and none the next; that there may be nectar in the flowers in one field, and none in the next field to it, in the same season; and that there may be nectar in a part of a field, and not any, or very little, in the remainder of it; that a field may get poor and "run out," as it is called, and not produce any honey, the same as a wheat field that has been sowed too often to wheat; that the richer the land is, the more honey it gives; that the first crop of the clover is the best; that black bees will work on red clover in this locality as well as Italians, and that neither will work on it in some seasons. The colony that had the most drones in my yard last season, had the most surplus, but it was the strongest colony I had. The AMERICAN BEE JOURNAL is cheaper by half than any of the monthlies. There are as many pages, and as large, and you get four in a month to only one of the others. There need be no more contention over the Punic bees; they simply are not in it. *Apis niger* is buried in oblivion, and we shall hear of them no more.

Richland Centre, Wis.

North American Bee-Keepers' Association.

W. Z. HUTCHINSON.

[Continued from page 21.]

Should Bee-Keeping be Made a Specialty?

This was the next topic taken up for discussion. Mr. McKnight said that if he wished to make a grand success of bee-keeping, he should make it a specialty. Bees can be kept in connection with other pursuits. He scarcely knew whether he would be called a specialist or not. He certainly gave special attention to bee-keeping.

J. E. Hetherington—In connection with this topic, I may say I remember a letter that I wrote to Mr. Quinby, when I was a young man, asking him if he would advise a young man to make a specialty of bee-keeping. Mr. Quinby said no. Later in life I referred him to this letter, and asked him how he would now answer it; and he said that his answer would still be the same. Just look over the list of those who kept bees 20 years ago, and have succeeded so well that they are still content to follow the business. How few they are! Mr. Quinby advised Winter school-teaching, dairying, or some kind of manufactur-

ing. As I am situated, I find it necessary to be a specialist.

J. E. Crane—I see no reason why bee-keeping need not be a success. In Vermont, bee-keepers are as successful as the farmers. I think specialty ought not to be discouraged, yet it is well to have something in connection with bee-keeping, as it is sometimes a failure.

J. E. Hetherington—I think I ought to qualify my remarks. Mr. Crane says that bee-keeping pays in Addison County, Vt. That is a good location. The same is true of Central New York. The trouble is that bee-keepers are not *positive* enough in their methods to succeed as specialists. So many *think* that a colony has a good queen; that it has enough honey for Winter; that its combs are good enough, etc. The trouble is they do not *know*; and that is why so many fail.

G. M. Doolittle—I was a farmer's boy, and "took to bee-keeping" much against my father's wishes. I once overheard my father telling a man how anxious he was that I should be a farmer. Said he: "I have *prayed* that Gilbert would make a failure of bee-keeping, but it looks now as though he was going to succeed in spite of my prayers." I worked the farm on shares until I saw my way clear to make a living from bees. I have lived to see that farm decline in value from \$75 to \$40 per acre. Where would I have been if I had remained on the farm? I should have been barely making a living. I have been told that a man who could successfully manage 100 colonies of bees, possessed ability that would command an annual salary of \$1,000. But salaried positions are uncertain. I have a home, the fresh air and freedom of the country, and a comfortable living. It is true that I am not now a honey-producing specialist. I have been thrown into queen-rearing, but I look back with regret to the time when I made money from honey alone. In 1874 I drew all my honey (several tons) to Syracuse, and sold it for 28½ cents a pound. Now it would not bring half that, and, for me, there is more money in queen-rearing.

N. D. West—In my opinion, it is not best for a young man to start out as a specialist. If a man gets a few bees, and likes bee-keeping, the next thing you know he will be neglecting his regular business for the bees. Then he will soon become a bee-keeper, and the other business will be dropped.

Next W. Z. Hutchinson read an essay

written by Wm. F. Clarke, on the "Prevention of Swarming."

[This was published last week on page 17.—ED.]

H. S. Stewart—I think Mr. Clarke gives some good points; one is that of giving plenty of room, but that is considerable work. Removing the queen is one way.

J. E. Crane—I have tried several methods, and I must confess I do not know how to prevent the disposition to swarm. Blacks have a greater disposition to swarm than have the Italians. I tried introducing young queens, but it failed. I have given it up in disgust, and decided to let them swarm, and then so manage them as to get the best work out of them by manipulation.

F. H. Cyrenius—I raise brood into the upper story, put a queen-excluder between the two stories, and the bees in the upper story rear a queen, and the bees do not swarm. I work for extracted-honey. In producing comb-honey I cannot prevent swarming.

G. M. Doolittle—in producing comb-honey I have never succeeded satisfactorily in preventing swarming. If a colony is kept from swarming, it is thrown into an abnormal condition. This is unprofitable. It is better to let them swarm, and then so manage as to make the most out of them.

S. Cornell—I know of a bee-keeper in Canada who puts 4 colonies on a revolving platform, or rather a colony at each end of a cross that may be revolved. Each day the cross is given a quarter turn. This mixes the bees, and the mixing seems to disconcert their plans for swarming.

P. H. Elwood—I do not know as I have anything new to offer on this point, It is the same old system that I have used so long—that of removing the queen. I will say, however, that there is a difference in strains of bees.

Ira Barber—What do you do with the queen when you remove her?

P. H. Elwood—if she is old we kill her. If we wish to keep her, we take with her a frame or two of bees and brood.

A Member—I have tried to prevent swarming by introducing young queens, but it did not work this year.

N. D. West—I remove the queen just about as the bees are ready to swarm, and put in a queen-cell that will hatch in two or three days. The queen hatches, and becomes fertile, and the bees do not swarm. By the time the queen is ready to lay, and the colony in

any danger of again getting the swarming fever, the season is over. All the cells are cut out, if there are any, when the queen-cell is given. The cell must be protected with a queen-cell protector when given, or it would be destroyed before the bees had discovered their queenless condition, and were ready to accept a young queen. I use hives with considerable room in the brood-chamber, and shade the hives. With a contracted brood-chamber this plan might not be so successful.

J. E. Crane—I have tried putting in a cell, but the bees would always swarm. I have been more successful by introducing virgin queens.

Next came an essay by G. H. Knickerbocker, entitled: "The Italian Bee—What are the principal points of excellence, and to which qualities should we give the preference, with a scale of markings as for neat stock?"

[This was published last week on page 20.—ED.]

G. M. Doolittle—I am satisfied that the Italian bee is a hybrid. We might adopt a standard for thoroughbreds, but I cannot see how it can be done, and yet to do no injustice.

Mr. Leonard—I see that some are advertising five-banded bees. I would like to know if they are *more* than thoroughbreds?

J. M. Hambaugh—I would like to have Mr. Doolittle tell why he calls Italian bees hybrids?

G. M. Doolittle—Black bees are always black. They are a fixed type. They do not sport. When brought from Italy, Italian bees may produce two-banded or three-banded bees. After awhile we find some of them showing four bands. By selection and care in breeding the four-banded bees we now have produced the five-banded bees, and I expect that we shall yet have bees that are *all* yellow. As Italians do not have a fixedness in their markings, I say that they are hybrids.

C. P. Dadant—Black bees do differ. We have the black, the gray and the brown, all called black or German bees. Bees from Italy differ in color. The bands may not always be just so bright, but they are *there*.

E. R. Root—We have imported many queens from Italy, and their progeny always shows the three bands.

G. M. Doolittle—There is no such thing as a one-banded or two-banded bee. If a bee shows *any* yellow, it shows yellow on three bands.

E. R. Root—To a certain extent I agree with Mr. Doolittle. I will say this much: If we look at a bee carelessly, or, perhaps, I should say casually, we would say that it was one or two-banded, when the same bee filled with honey and placed upon a window would show three bands.

C. P. Dadant—The bee-keepers' association of Italy asserts most emphatically that all the bees of Italy are yellow.

J. E. Crane—We know that many three-banded bees "sport," but, for all that, I see no objection to the adoption of a "standard of excellence."

O. L. Hershiser—Have imported bees ever shown more than three bands?

C. P. Dadant—I believe we were the first to import Carniolans, but we quit importing them, and said nothing about it, because we found out that we were getting nothing but black bees. The bees from the other side of the mountains were of a different brown. This proves what I told Mr. Doolittle, that black bees do differ.

To save time a committee was appointed to draft a standard of excellence for Italian bees, to be laid before the convention for its consideration. The following were appointed: G. H. Knickerbocker, G. M. Doolittle, C. P. Dadant, and J. E. Crane.

Next came a communication from Dr. A. B. Mason, on "The Outlook for Apiculture at the Columbian Exposition." The Doctor was unable to be present. His duties as postmaster were such that he could not leave at this time. W. Z. Hutchinson read the communication.

[This was published on page 19.—ED.]

J. E. Hetherington—At the Centennial we were allowed to enter our honey as late as September; yet there were only four exhibitors. It is difficult to keep honey over, and have it look well. I think it should be so managed that we can have at least until the first of August before placing honey on exhibition.

S. Cornell—I think bee-keepers should overwhelm them at Chicago with letters stating what is wanted. Unless space is granted in advance, when the time comes for it to be used, it will be occupied with something else.

J. E. Hetherington—There should be a committee appointed that will attend to this matter from now until the World's Fair opens.

O. L. Hershiser—By July half the number of visitors to the World's Fair

will have made their visit. We might have extracted-honey on exhibition early, and then change to comb-honey after the new crop had been harvested.

J. E. Hetherington—That would be all right. Let us show honey and implements, and then make a *grand* show of honey at one particular time, but all this can be arranged and looked after by a committee.

J. M. Hambaugh—I think it would be better and grander to have all the honey show, from all the States, in one grand display.

It was finally moved and carried that a committee of three, with Dr. A. B. Mason as chairman, be appointed to look after the aparian interests at the coming Columbian Exposition. By vote it was decided that P. H. Elwood and J. M. Hambaugh should be the other two members of the committee.

The Use of Separators.

The question was asked, through the question box, does the use of separators pay for the loss of honey caused by their use? The committee appointed to answer these questions replied that it is not admitted that there is a loss attending their use, but even if a loss did occur, they ought to be used.

J. E. Crane—I have had sections filled in which a bee-space had been allowed around the outside of the sections. The combs were well attached, much better than when no such space was given. Combs are more travel-stained when no separators are used. I secure no more honey by abandoning the use of separators.

N. D. West—I can get more honey with less trouble by using separators.

Place of Holding the Next Meeting.

Buffalo, New York, Toledo, Cleveland, Denver, and two or three other places were mentioned as being desirable places for holding the next convention, but the choice finally fell upon Washington, D. C.

Election of Officers.

The election of officers resulted as follows:

President—Eugene Secor, Forest City, Iowa.

Vice-President—Capt. J. E. Hetherington, Cherry Valley, N. Y.

Secretary—W. Z. Hutchinson, Flint, Mich.

Treasurer—E. R. Root, Medina, O.

Spraying of Fruit Trees.

After the election of officers, Prof. J. A. Lintner, State Entomologist for New York, asked to be allowed to say a few words in regard to the practice of spraying fruit trees with Paris green or London purple, or any arsenical poison. In substance, he said that this practice had become indispensable to success in fruit growing. The egg of the codling-moth is laid just as the blossom falls, and a short time after this is the time to spray the trees in order to destroy the just-hatched larva; but spraying is also resorted to in order to destroy the curculio and other insects, and it would be an advantage, so far as the destruction of some insects is concerned, if spraying could be resorted to previous to and during the bloom. I have always advised against spraying during the time of blooming, although I think experiments are needed to prove that spraying the bloom is injurious to bees. I would like to know if any one present *knows* that bees have been injured by the spraying of trees in bloom.

C. P. Dadant—Mr. J. G. Smith, of New Canton, Pike County, Ills., lost 60 colonies of bees from the heavy spraying of trees before, during and after the bloom.

Prof. Lintner—I would ask if there was any examination made of the honey to see if a trace of arsenic could be detected? Unless this was done, or there are other similar cases, I must beg leave to doubt if bees were killed by the poison. There are other injurious insects besides the codling moth; and, in fighting some of these, it is necessary to spray before and during the bloom, but, as I have already said, I have advised against spraying during bloom, because there have been reports that bees have been killed thereby. I think it is in Illinois only where legislation has been attempted upon this point.

I. L. Scofield—We had a large number of healthy colonies when spraying began, and many colonies were dead when the spraying season was at an end.

Prof. Lintner—There need be no question upon this matter, as an analysis of the honey gathered, or of the honey in the sacs of the bees that die, would set the matter at rest.

C. P. Dadant—That would not answer, as the bees that eat the poison may not reach their home. Then, again, how are we to prove that the bees obtained

the poison from such-and-such an orchard? Bee-keepers never have good, strong, healthy colonies die during apple bloom. It is a thing unheard of, except where trees have been sprayed, during bloom, in the neighborhood.

J. E. Crane—I know of a man who sprayed his trees during bloom, and reported finding large quantities of dead bees under his trees.

R. McKnight—I think many bees are killed by the use of Paris green on potato vines.

G. H. Knickerbocker—Many use the poison too strong.

C. P. Dadant—if the poison used is strong enough to kill the insects that feed upon the blossoms, why will not the bees that gather the nectar suffer in a like manner? In our locality, spraying during bloom has been dropped.

P. H. Elwood—I saw a statement by Prof. Cook, saying that he had fed bees a solution of arsenic of the standard strength for killing insects, and it killed the bees. Now, if the poison kills one insect, why not another?

Prof. Lintner—The insects killed are so small that the poison used for the work need not be strong enough to injure the bees.

G. M. Doolittle—I should not like to have it go out that the spraying of potato vines causes more damage than the spraying of fruit bloom. We do not lose bees at the time of the year when potatoes are being sprayed, but at the time of spraying during fruit bloom.

E. R. Root—In the great mass of correspondence that passes through our hands, I notice that many complain of the loss of bees from the spraying of fruit trees, but no such complaints come at the season of the year when potatoes are sprayed.

The Society decided by vote that at the present state of our knowledge, the spraying of fruit trees while in bloom is condemned.

A vote of thanks was given Prof. Lintner.

It was thought that a committee ought to be appointed to make or look after experiments made with a view to proving whether the spraying of trees while in bloom actually does lead to the destruction of bees. The following gentlemen were appointed: S. Cornell, Lindsay, Ont., J. E. Crane, Middleburg, Vt., and I. L. Scofield, of Chenango Bridge, N. Y. This committee was to act with Prof. Lintner.

The following from Mr. R. F. Holtermann was read, on

Some Facts not Generally Known about Rendering Beeswax.

The subject to which I am about to refer I shall not attempt to clothe in much language, but it is important, and particularly so in view of recent discussions upon the spread of foul-brood through wax, and how it is to be prevented.

We know that there is scarcely any, if any, natural produce, be it in the animal or vegetable kingdom, which can be heated to any material degree above that in which it was produced, and retain the same properties of nature as it did before so heated, yet we appear to ignore the fact in the melting of beeswax.

The general bee-keeping public do not appear to be aware that wax can be injured by heating almost to the boiling point, or by long and continuous heating at a somewhat lower temperature. Is such the fact? I am convinced that whilst the average wax is rendered with less injury now than in former years, the average wax has lost a portion of the valuable properties which it possessed when first generated by the bee.

Of course, you have a right to ask, Is this a suggestion upon the line of which I wish you to experiment and observe in the future, or have I proof? Well, it is both. I believe it will only require careful reflection and a few arguments in favor of my—call it theory, if you like, to lead many of you to at least reflect.

Wax produced in countries considerably south of us, should surely, if anything, be stronger and better able to resist a high temperature, and yet the average beeswax from the South will break more easily in the hive than our own. After months of reflection, I can only come to the conclusion that the reason is, that in these localities the methods of rendering are more crude, and it is more liable to injury from over-heating in that process.

Again, I know and have seen, comb-foundation made from wax rendered in the solar wax extractor, put in the hive much thinner than ordinarily, and yet not sag or break down. I could assign no other reason for this, than that by the rendering it received less injury, as it had not likely reached the same temperature as that rendered by different methods.

Observation has led me to conclude that natural comb is, for the amount of

wax in it, stronger than that built from the average beeswax for comb-foundation. I can assign no other reason for this than that already given. You will all be able to understand what this has to do with the foul-brood question.

Instances of foul-brood, although never in my own apiary, have come under my notice, and I do not feel inclined to believe that the disease is spread through beeswax after melting. Yet we should use every precaution until we are sure it is not so spread.

If we have to injure our beeswax by using such a precaution, it is certainly time steps were taken to find out if the disease of foul-brood can be spread as indicated, and that arrangements were made to properly test the matter.

R. F. HOLTERMANN.

Killed by the Sting of a Bee.

DR. J. W. VANCE.

We read not long since in a medical journal the statement that a young man, Wm. H. Danley, of Williamsport, Pa., died from the sting of a bee in 15 minutes from the time he received the sting. Mr. D. complained of excruciating pain; his hand at once began to swell rapidly, and in a few minutes his whole system was affected. Ten minutes after being stung, he fell into a comatose condition, and before aid could be summoned, he was dead.

There were some surmises as to the why and wherefore, but it is idle to attempt to explain why a bee-sting will kill a robust young man, when so many delicate people are stung hundreds of times every Summer with no poisonous effects, except a slight local inflammation. We were somewhat amused by the query of the writer in the medical journal, that the bee that stung the deceased might have imbibed some virulent poison.

It caused us to ask, whence do bees imbibe the ordinary poison with which they charge their stings?

About all we know of the nature of the poison is that it is similar to formic acid, but what its relative component ingredients of carbon, hydrogen and oxygen are, we have not yet found out. It is a secretion of certain glands that is gathered into a receptacle called the poison sac. Usually, when the bee inflicts a sting, the poison sac is lost with the sting, which becomes fixed in the skin, by the minute barbs with which

the point is furnished. It is said that the bee always dies when it stings.

I have been stung slightly when the sting was not left. I think, when that occurs, the bee does not die, for in my opinion it is the loss of the sting and its appendages that proves fatal to the bee's life.—*Wisconsin Farmer.*

Foul-Brood and the Utah Association.

JOHN C. SWANER.

The following is a copy of the Foul-Brood Bill which will be presented before the Territorial Legislative Assembly, when that body meets this Winter. Every bee-keeper who is interested in the welfare of the pursuit, should get his neighbor bee-keepers, as well as himself, to sign a petition, requesting the member of his district, to vote in favor of this Bill. Act at once, if you expect to do any good. Every individual bee-keeper should be interested.

FOUL-BROOD IN BEES.

An act for the protection of bee-culture, and to repeal all other acts and laws in relation thereto.

SEC. 1. Be it enacted by the Governor and Legislative Assembly of the territory of Utah; that it shall be the duty of the County Court of each county to appoint from among the bee-keepers of the county, one or more suitable persons as Inspectors of Bees.

SEC. 2. These Inspectors shall be appointed biennially, viz: On the first Monday in March of each alternate year, or at the first regular sitting of the Court thereafter, and shall perform the duties of Bee Inspector for two years, and until their successors are appointed and qualified. Said Inspectors shall qualify by taking and subscribing an official oath, and giving bonds with sureties to be approved by their respective County Courts in the sum of five hundred dollars; said bonds to be filed with the clerk of said Courts.

SEC. 3. In determining the fitness of a person to fill the position of Inspector, the Court shall be guided by the local bee-keepers' associations in their respective counties, and it shall be deemed lawful for any Inspector, if he so desires, to invite one or more persons to assist him in prosecuting his inspections. *Provided*, that no charge is made for this voluntary service.

SEC. 4. It shall be the duty of the Inspector to visit all the bees in his county

or district at least once a year, and at any time, upon the complaint of any bee owner, that, in his opinion, the disease known as foul-brood exists among the bees of any person, whether owner or custodian. It shall be the duty of the Inspector, to whom the complaint is made, to immediately inspect the bees believed to be thus infected; and if such Inspector finds that foul-brood does exist among such bees, and the owner desires to have them treated, said Inspector shall immediately take charge of and control them, at the expense of the owner, and give them the proper treatment for the cure of the disease. In such treatment he may destroy such portions of the bees and brood, and of the hives and contents, as may be necessary. *Provided*, in case the owner has any doubts about his bees being infected, and objects to their being destroyed, as in this Act provided, then such fact shall be determined by arbitration, the said Inspector choosing one arbitrator, and the owner of such bees another, from among the bee-keepers of said county, who shall immediately inspect such bees, and determine whether or not the bees so inspected are diseased; or, when they cannot agree, they two may choose a third from among the bee-keepers of said county, and the three shall proceed immediately to inspect such bees, and determine whether or not the bees so inspected are diseased.

SEC. 5. If the owner or person in charge of bees infected with foul-brood shall fail to make arrangements acceptable to the Inspector for his compensation, and the necessary expenses to be incurred in the treatment and cure of the bees (which shall in no case exceed three dollars per day and actual expenses), then the Inspector shall immediately wholly destroy the hives and bees so infected by burning or burying the same.

SEC. 6. If any person, by threats of violence, or in any other manner, shall prevent a duly-appointed Bee-Inspector from inspecting, taking charge of, treating or destroying bees, as provided in this Act, on conviction thereof before the nearest Justice of the Peace of the precinct in which said bees are kept, shall be deemed guilty of a misdemeanor, and shall be fined in any sum not less than \$5.00, nor more than \$25.00 for the first offense, and for each additional offense he shall be liable to a fine not to exceed \$50.00.

SEC. 7. To provide for the prosecution of the duties of Bee-Inspectors under this Act, the County Courts are hereby

authorized to, and shall appropriate the sum of \$3.00 per day, and necessary expenses, for the time that the Inspector is actually employed in the performance of his duties, out of the revenues of the several counties. *Provided*, that in no case, when such Inspector receives compensation from the owner of bees, so infected, for the care, treatment or destruction of the same, as in the Act provided, shall he be paid by the several counties as in this section specified.

SEC. 8. All Acts and parts of Acts, inconsistent with the provisions of this Act, are hereby repealed.

Skunks as Bee-Enemies.

J. ANDERSON.

Last season I discovered that my apiary was regularly visited by a mighty rover. Three of my best hives gave evidences that some foe relished a supper of Italian bees.

For a time I was perplexed to know what the enemy was, so in order to put an end to the depredations, a trap was set, and different kinds of bait was used, but the rover preferred insect food, to any thing I offered; even *dead* drones was no attraction. My three excellent colonies, instead of swarming, rapidly decreased, and the excrements of the enemy which were here and there in heaps through the apiary, showed where they went.

At last, I used as a bait a fat sparrow which is now a very great nuisance in this county. The next morning, before I reached the apiary, the peculiar state of the atmosphere conveyed to my mind the interesting intelligence that the foe was caught, and was nothing but a skunk.

The sparrow's flesh was more enticing to his skunkship than that of the insects on which, for the previous weeks, he had been feeding.

Tiverton, Ont., Dec. 24, 1891.

Bee-Scouts Selecting a Home.

LAWSON HEGLER.

On page 814 (1891), Mr. G. W. Demaree says that he does not care to discuss the subject of bee-scouts further, but I will disregard his desire and have my say.

One morning last summer, I saw bees

cleaning out a tree, about 200 yards from my apiary. About noon a swarm issued from a hive that I had been watching, and clustered on a tree near by. I hived them, but about 4 o'clock when they swarmed again, and without clustering they made a line for that tree. I started as soon as the bees, and never lost sight of them. I got there as soon as they did, and saw them go in. They were Italians, and as I paid a high price for the queen, I did not propose to lose them. I cut the tree the next morning, and the inside of the tree was as clean as a kitchen floor, with not a trace of old-comb, stump-water or anything else, except a piece of new comb with a few eggs in it.

A few days before that, I cut a tree that I supposed contained bees, but as soon as the tree fell, every bee made off, and on examination it was as nice and dry and clean as bees could make it.

On another occasion I saw a swarm of bees clustered on a bush near the edge of the woods, and the scouts were hunting in every crack and hole in the trees in that piece of woodland, but as soon as they were hived they came to the hive. If there are plenty of flowers and a good honey-flow, bees will hunt a place near by, and go to it; but if there is a scarcity, they will fly until they find a suitable location, cluster, send out scouts, find a cavity, and go to it.

I could give other proofs, but I think this will suffice.

McLean, O.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee-Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with \$1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Now is the time to join the National Bee-Keepers' Union. Send to this office for the necessary Blanks.

CONVENTION DIRECTORY.

Time and place of meeting.

1892.
 Jan. 18, 19.—Colorado State, at Denver.
 H. Knight, Sec., Littleton, Colo.
 Jan. 20, 21.—The Minnesota, at Owatonna.
 Wm. Danforth, Sec., Red Wing, Minn.
 Feb. 10, 11, 12—Ohio State, at Cincinnati.
 S. R. Morris, Sec., Bloomingburg, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Eugene Secor, Forest City, Iowa.
 SECRETARY—W. Z. Hutchinson, Flint, Mich.

National Bee-Keepers' Union.

PRESIDENT—James Heddon, Dowagiac, Mich.
 SECY AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

☞ Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Large Increase.

I had 44 colonies of bees, Spring count, which increased to 76 colonies, and gave me 2,000 pounds of comb-honey, and from 600 to 700 pounds of extracted-honey, all of which was from basswood—not a pound of dark honey in the lot. I sold 1,000 pounds of comb-honey at 15½ cents per pound to Stewart & Elliott, at Minneapolis, Minn. I have united them down to about 60 colonies for Winter.

GEO. H. AURINGER.
 Bonniwell's Mills, Minn.

Bees Working Now.

I have received the annual report of the National Bee-Keepers' Union, together with the membership blank, today. In reply I will say that I am glad to see such an increased membership, and I am also glad to vote for some of the good members for the offices to be filled. At some later date I will give you some little idea of bee-keeping in this locality. Probably you will hesitate to believe, when I tell you that my bees are now working every day. Of course

they are not storing any surplus, but they are gathering enough to live on. You know that the bees in this locality are all wintering on the summer stands, and require but little care during the winter. Bee-keeping here would be a grand success, if carried on in as thorough a manner as in the East; as it is, we frequently get tremendous crops.

W. A. CHOATE.

Colton, Calif., Dec. 20, 1891.

They Laugh at Us.

I am very fond of reading the AMERICAN BEE JOURNAL, the contents of which are always very interesting to me, and are of much value for bee-culture in general. In order that Germany may profit by the advancements of American apiculture, as well as other countries, I have a column in the *Bienen-Centralblatt*, in which I regularly once a month give translations from American, French, Italian, and other bee-periodicals. Allow me to say that it would be better to stop that humbug about the "golden Carniolans." People in Carniola are laughing about it, and such a stupid article as Fleischmann's in the *Leipziger*, is the result.

H. REEPEN.

Hessen, Germany, Dec. 12, 1891.

My First Lessons in Bee-Keeping.

I was born in Preble County, O., Sept. 19, 1814, and when I was about 6 weeks old my parents took a notion to move to Indiana Territory, and being in my minority, I went with them. It was there that I took my first lessons in bee-keeping. We found our first colonies in hollow trees, and from Nature we took our first lessons, using sections cut from hollow trees for hives. We wintered our bees in those hives on the summer stands, without any protection whatever, when the thermometer often indicated 16°, 20° and 25° below zero. Here in Northern Iowa bees winter in hollow trees, where 40° below zero is no strange occurrence, and it was from those indications that I planned my bee-house. There has been great improvement during the last 50 years in bee-keeping, but we have had to go to the bees themselves for the suggestions. There may be a certain temperature in which it would be best to winter bees, but if there is, I would rather believe it to be below than above the freezing point. There is always more or less dampness arising from a healthy colony of bees, and it should have a way to

escape, so as not to condense immediately around the bees. Keep bees dry and quiet, and I think they will survive a temperature of 25° below zero. Mine survived 16° below zero in the house last Winter, and I have a neighbor whose bees are yet (Dec. 18) on the summer stands, without any protection, and still are all right. The thermometer has been 10° below zero. I housed mine on Nov. 13, 1891. C. LOWER.

Decorah, Iowa.

My Experience in Keeping Bees:

I have read the AMERICAN BEE JOURNAL for several years, but have not noticed any correspondence from this locality. There are quite a number keeping bees here, but I do not think they know of the existence of the BEE JOURNAL. I have taken several bee-papers, but I like it better than all others. I commenced to keep bees in 1881, with one colony of black bees, in a box hive, which cost me \$5.00. I had an increase of 12 swarms within two years. They were all hived in 8-frame Langstroth hives. In 1884 I lost them all from the use of honey-dew. I then purchased another colony, and now have 43. From 28, Spring count, I got, during the past Summer, 800 pounds of white comb-honey, and an increase of 15 swarms. I have 23 in boxes 3x12, packed with chaff; the other 20 are in the cellar. As this is my first experience in wintering bees in a cellar, I thought I would risk only part of them in that way. CHAS. E. FALKNER.

Pioneer, O., Dec. 21, 1891.

Bees Wintering Well.

The honey crop of last season was very light, and the quality was very poor and dark. Owing to the cold weather during Spring, we obtained scarcely any white clover honey, though there was an abundance of white clover bloom. My bees are wintering well.

A. F. SANGER.

Pilot Grove, Mo., Dec. 29, 1891.

Wintering Bees on Honey-Dew.

I have 41 colonies of bees in the cellar, in fair condition. I did not get much honey last Summer—only 700 pounds, and that was rather dark, and I had only 4 or 5 swarms. I had to feed 6 colonies. I do not know how they will winter on honey-dew. I find

that the dark honey improves the longer it is kept. We sell it here at from 8 to 12 cents per pound, in the comb.

WM. L. MITCHELL.
Erie, Ills., Dec. 30, 1891.

Few Swarms, and Little Honey.

The past season in Pennsylvania, while not a complete failure, was a poor one—many apiaries yielding nothing for surplus. There was but little swarming. Most of the colonies have enough to Winter on. My yield was 600 pounds, from 16 colonies, of extracted and comb-honey. I sold the comb-honey for 15 cents per pound, at the store and to neighbors; the extracted I sold for 11 cents per pound. Honey is scarce, but at the prices demanded (20 cents at retail) it sells slowly.

GEO. SPITLER.
Moscirtown, Pa., Dec. 28, 1891.

Good Crop of White Honey.

This has been a fairly good year for honey, with those who cared for their bees properly. The crop of white honey was good, but the fall flow did not amount to scarcely anything. I have done better than any one else in this locality. Some report but very little honey. The honey flow commenced about June 1 and continued till July 20. I commenced the season with 13 colonies, increased to 24 by natural swarming, and secured 700 pounds of comb honey. One swarm went to the woods. I winter my bees on the summer stands; 13 colonies are in boxes packed in chaff, and 10 are in the Root dovecailed winter cases.

D. I. WAGAR.
Flat Rock, Mich., Dec. 29, 1891.

Bees Wintering on Summer Stands.

Last Spring I had 45 colonies of bees—all that were left out of 75 of the fall before. I took from them 1,500 pounds of comb-honey, increased them to 75 colonies again, which are now on the summer stands in double-walled hives, and appear to be in good condition. Last year was the worst for wintering bees, for 10 years. Some that had but few are without any now. There was plenty of white clover, but it did not yield any honey. Our crop was mostly from raspberries and basswood.

J. H. MANCHESTER.
Preble, N. Y., Dec. 29, 1891.

Mine are Fine Italian Bees.

I am a beginner in apiculture, and a great friend of the honey-bee. I have enjoyed the work so far very much. I have 51 colonies, which go into winter quarters in good condition. During the past season I took off 300 pounds of extracted-honey. It would have been an excellent year for honey had the drouth not set in. I notice one of my colonies does not gather propolis; or has not during the past two seasons. I got one swarm from this colony this season, and have never found propolis in the surplus cases. They are jet black bees. I bought 24 Italian queens, and introduced them into the hives of black bees. They were fine queens, and proved to be a success. Now all my bees are fine Italians. I send you the Pittsburgh *Dispatch*, and marked an item entitled, "A New Artificial Honey." What comment have you to make?

Moselle, Mo. JAMES A. POWERS.

[Our comment is on page 37—ED.]

That Cook-Book Premium.

When the AMERICAN BEE JOURNAL of Dec. 10 arrived, I was agreeably surprised. On stepping into the house, my wife, having it in her hands, looked up into my face with a smile, and said: "Are you going to take this paper next year?" "Yes," I replied, "we cannot do without it." Mrs. Fisher, holding the paper up, said: "I want this book," and handed the paper to me. I read the whole of page 766. "I want that cook-book," said my wife a second time. "All-right, wife," I said, "we will accept the offer, and you shall have that cook-book. Now, dear reader, if you want the eyes of your better-half to sparkle, and a sweet smile to roll across her face, just look up the BEE JOURNAL, and let her read what is offered on page 766; then tell her that you accept that offer, and that she shall have the book. Read that page carefully, and see how much is offered for \$1.30. Show your friends and neighbors that liberal offer, and you will succeed in introducing the AMERICAN BEE JOURNAL into many homes where it has never gone before. Bro. Newman gives us a first-class weekly BEE JOURNAL. Now let each reader show his or her appreciation by getting a few new subscribers, thereby enabling the JOURNAL to be a greater blessing to bee-keepers in the year 1892.

JOHN D. A. FISHER.

Woodside, N. C., Dec. 29, 1891.

Wavelets of News.**Successful Apirists.**

To be successful in any business you must be, love with it. No one can make a success with bees when he takes it up because he thinks there's "money in it." He will soon abandon it in disgust.—*Missouri Bee-Keeper.*

Welcome Visitor.

A welcome monthly visitor is the ILLUSTRATED HOME JOURNAL, a fine publication for the family and fireside, devoted to fashion, music, household topics, decorative art, and interesting stories.—*New Bedford, Mass., Standard.*

Bee-Keepers' Union.

The Bee-Keepers' Union has done a grand and good work in defending bee-keepers. The Union has 571 members. If a neighbor gets slightly offended at a bee-keeper, his first attempt at revenge is to work on the City Council to have the bees declared a nuisance, and have them removed from the city limits.—*Missouri Bee-Keeper.*

Many "Wavelets of News" are crowded out this week.

Convention Notices.

The annual meeting of the Colorado State Bee-Keepers' Association will be held in Denver, Jan. 18 and 19, 1892.

H. KNIGHT, Sec., Littleton, Colo.

The Minnesota Bee-Keepers' Association will meet in Owatonna, Minn., on Jan. 20 and 21, 1892. Free entertainment will be provided for those attending by the citizens of Owatonna, and it is expected that the railroads will carry those attending, at reduced rates. The State Horticultural Society hold their annual meeting at the same time.

W.M. DANFORTH, Sec., Red Wing, Minn.

The Ohio State Bee-Keepers' Association will hold its next annual meeting at the West-End Turner Hall, on Freeman Avenue, Cincinnati, O., from Feb. 10 to 12 inclusive, 1892, beginning at 10 a.m. Wednesday, Feb. 10. All local associations should endeavor to meet with us or send their delegates. Those intending to be present, will please send their names to the Secretary, at their earliest convenience. The President will endeavor to get reduced railroad rates, and also reduced rates at hotels. The programme will soon be issued, and all particulars published.

C. F. MUTH, Pres., Cincinnati, O.

S. R. MORRIS, Sec., Bloomingburg, O.



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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,

BUSINESS MANAGER.

Special Notices.

Send us one new subscription, with \$1.00, and we will present you with a nice Pocket Dictionary.

The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	\$1.00
" 100 colonies (220 pages)	1.25
" 200 colonies (420 pages)	1.50

As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for \$1.25; or for 200 colonies for \$1.50. *Order one now.*

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

We Club the American Bee Journal and the Illustrated Home Journal, one year for \$1.85. Both of these and Gleanings in Bee Culture, for one year, for \$2.15.

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted-honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

When talking about Bees to your friend or neighbor, you will oblige us by commanding the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book, by mail, postpaid. It sells at 50 cents.

HONEY AND BEESWAX MARKET.

NEW YORK, Dec. 31.—Demand is limited, and supply sufficient. No demand for 2-lb sections. We quote: Comb—Fancy white, 1-lb, 13@14c; off grades, 1-lb, 10@11c; buckwheat, 1-lb, 9@10c. Extracted—Basswood, 7c; California, 7@7½c; buckwheat, 5½@6c; Southern, 65@70c per gal. Beeswax, scarce and firm, at 26@28c.

HILDRETH BROS. & SEGELENKIN,
28-30 West Broadway.

KANSAS CITY, Mo., Dec. 31.—Demand and supply are fair. We quote: White comb, 1-lb, 15@16c; dark, 10@12c. Extracted—White, 7c; dark, 5@6c. Beeswax, is in light supply, and demand good, at 23@26c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, Dec. 31.—The demand is slow, with good supply, except choice comb. We quote: Choice white comb, 14@16c. Extracted, 5@8c. Beeswax is in good supply and fair demand, at 23@25c for good to choice yellow.

C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, Dec. 31.—Demand for honey is fair, with adequate supply. We quote: Fancy 1-lb, 14c; do 2-lb, 12c; fair, 10@12c; buckwheat, 9@10c. Extracted—Clover and basswood, 7@7½c; buckwheat, 5½@6c. Beeswax, in fair demand, with adequate supply, 26@27c.

CHAS. ISRAEL & BROS., 110 Hudson St.

CHICAGO, Dec. 30.—The demand is good for fancy white comb-honey, in 1-lb. sections, at 15c; other grades white, 12@14c. Extracted honey slow sale, owing to abundance of fruit. We quote it at 6½@7½c. Beeswax, in light supply and good demand, at 26c.

S. T. FISH & CO., 189 S. Water St.

KANSAS CITY, Mo., Dec. 31.—Demand poor, with large supply of comb. We quote: Comb—1-lb, fancy, 15@16c; dark, 12@13c. Extracted—White, 7@7½c; dark, 5@6c. Beeswax—None in market; light demand.

HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, Dec. 30.—The demand for comb-honey is fair and supply moderate. We quote: Comb, 12@13c; extracted, 7@8c. Beeswax in good supply, and light demand, at 25@26c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, Dec. 31.—Demand good and sufficient. We quote: Comb, 14@16c. Extracted, 6@7c. Beeswax, in light supply, and good demand, at 25@27c.

J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, Dec. 30.—Demand fair and supply good, except of the best quality. We quote: Comb—choice, 1-lb, 15@16c; fair, 13@14c; dark, 10@12c. Extracted—white, in barrels or kegs, 7½@8c; dark, 6@6½c. Beeswax, 23@28c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, Dec. 30.—Demand good, supply small. We quote: Comb, 1-lb, 10@14c. Extracted, 5½@6½c. Beeswax, in light supply and good demand, at 23@25c.

SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

MINNEAPOLIS, MINN., Dec. 29.—Demand is moderate, supply ample, and shipments coming in freely. We quote: White comb, 17@18c; dark, 14@15c. Extracted, 10@10½c.

STEWART & ELLIOTT.

CHICAGO, Dec. 31.—Demand is now good, supply is not heavy. We quote: Comb, best grades, 15@16c. Extracted, 6@8c. Beeswax, 26@27c. R. A. BURNETT, 161 S. Water St.

BOSTON, Dec. 30.—Demand is light, supply ample. We quote: 1-lb. fancy white comb, 14@15c; extracted, 6@7c. Beeswax, none in market.

BLAKE & RIPLEY, 57 Chatham St.

ALBANY, N. Y., Dec. 30.—Demand is slow, supply not liberal, as stock is mostly in. We quote: White comb, 12@15c; buckwheat and mixed, 8@12c. Extracted—Light, 7@7½c; dark, 6@6½c. Beeswax—Supply light, and demand steady, at 28@29c.

H. R. WRIGHT, 326-328 Broadway.

NEW YORK, Jan. 1.—Demand is light, and supply large, except buckwheat comb. We quote: Fancy white comb, 12@14c; buckwheat, 9@11c. Extracted—Clover and basswood in good demand at 8½@7c; buckwheat in demand at 5@6c. Beeswax in fair demand at 26@28c.

F. I. SAGE & SON, 183 Reade St.

NEW YORK, Dec. 30.—Demand moderate, and supply reduced, with no more glassed 1-lb nor paper cartons, 1-lb. We quote: Comb, 1-lb, 14@15c. Extracted—Basswood, 7½@7½c; buckwheat, 5½@6½c; Mangrove, 68@75c per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.

F. G. STROHMEYER & CO., 122 Water St.

Money in Cabbage and Celery.—“Blood will tell.” Good crops cannot be grown with poor strains of seed.

For 16 years Tillinghast's Puget Sound Cabbage, Cauliflower and Celery Seeds have been gaining in popularity. The most extensive growers all over the Union now consider them the best in the world. A catalogue, giving full particulars regarding them, will be sent free to any one interested. When writing for it, enclose 20 cents in silver or postage stamps, and we will also send “How to GROW CABBAGE AND CELERY,” a book worth its weight in gold to any grower who has never read it. Address

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Under this heading, Notices of 5 lines, or less, will be inserted at 10 cents per line, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—Bee-keepers to send for my price and samples of Comb-Foundation. JACOB WOLLERSHEIM, Kaukauna, Wis.
1Atf

FOR SALE—TEN BARRELS OF CHOICE Extracted-Honey. Address
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Advertisements.



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Everything used in the Apairy. Greatest variety and largest stock in the West. New catalogue, 54 illustrated pages, free to Bee-Keepers.

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The Bee-keeper's name and address will be printed on the first page without extra cost, when 25 or more are ordered at one time.

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A MAN with a little capital—about \$500.00—can go as a partner in a business. If he is willing to work he can make from \$10 to \$15 every day for himself, besides. Territory to sell. The business continues in winter and summer throughout the United States. Sickness and old age is the cause of wanting a partner. Address, FREDERICK SCHACH,

21 Atf SEDALIA, Pettis Co., MO.

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BEES YELLOW ALL OVER.

See what my Circular says about them. Sent free. J. A. ROE,
21 Atf UNION CITY, INDIANA.

Mention the American Bee Journal.



TEXAS.

朋友们对 I make a Specialty of **Fine Italian Queens**. Untested, March, April and May, \$1.00; after, 75c. each. \$4.20 for Six, \$8.00 a dozen. Five Banded Bees, the yellowest in America, same price as above. Money Order Office, Greenville.

21 Atf JENNIE ATCHLEY,
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In March and April, each.....	\$2.00.
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The arrival of the Queens is guaranteed. Those that die during the voyage, if returned by letter, are replaced by mail, postpaid. No order for less than 8 Queens by express, will be accepted.

The money must be sent with the order. Discount of 5 per cent. on the orders for all the year, if ordered in February.

21 Atf D. TREMONTANI,
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Mention the American Bee Journal.

HILL'S BEE-SMOKER AND BEE-FEEDER



Smoker burns hard-wood chips without special preparation. Very reliable. Greatest smoking capacity. Easiest to start. Cheapest, because it saves time. Price, \$1.20; by mail, \$1.40; per dozen, \$10.80.



Best Bee-Feeder. Most convenient. Saves feed. No daubing or drowning. Two to seven Feeders full may be given a colony at one time, which will be stored in the combs in 10 hours. Price, per pair, 30 cents; by mail, 40 cents; per dozen, \$1.60. Has a sale of 2,000 per month.

Thos. G. Newman & Son, Chicago, Ill.; W. H. Bright, Mazeppa, Minn.; G. B. Lewis Co., Water-town, Wis.; Chas. Dadant & Son, Hamilton, Hancock Co., Ills.; E. Kretschmer, Red Oak, Iowa; H. McK. Wilson & Co., 202 Market St., St. Louis, Mo.; F. H. Dunn, Yorkville, Ills.; W. D. Soper & Co., Jackson, Mich.; Chas. A. Stockbridge, Ft. Wayne, Ind.; A. F. Fields, Wheaton, Putnam Co., Ind.; W. S. Bellows, Ladora, Iowa Co., Iowa; E. F. Quigley, Unionville, Mo.; Gregory Bros., Ottumwa, Iowa; M. H. Hunt, Bell Branch, Wayne Co., Mich.; P. L. Viallon, Bayou Goula, La.; Miller Bros., Bluffton, Mo.; Chicago Bee-Keepers' Supply Co., Topeka, Kans., keep our Feeders and Smokers for sale.

A. G. HILL, Kendallville, Ind.
26E13t

Mention the American Bee Journal.

GLEANINGS IN BEE-CULTURE

Is a 36-page, semi-monthly bee journal, with tinted cover, printed on heavy, fine glazed paper, in the highest style of the art. Each issue is handsomely illustrated with original engravings of prominent bee men, apiaries, honey exhibits, hives and their appurtenances. Price, \$1.00 per year. Sample copy free on application.

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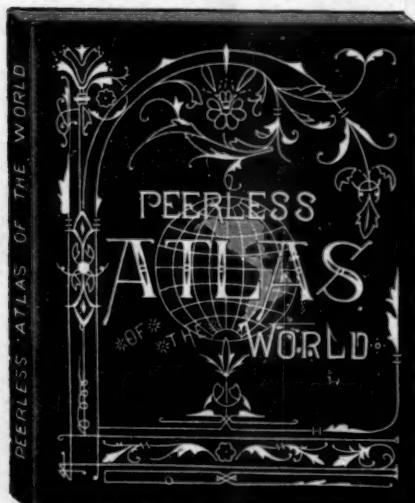
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